to shed more light on the exact nature of the transduction mechanisms at adenosine receptors that fit poorly into the A_1/A_2 classification in terms of rank order of potency of agonists and lack the effect of adenyl cyclase, and which thus gets very little mention here. In addition, I hope consideration will be given to the relationship in evolutionary or functional terms, between adenosine receptors and the other major class of purinoceptor, P_2 receptors recognising adenine nucleotides. In the interim period, this volume will be of great value to those entering the field of adenosine receptor biology, particularly if they require good overviews of how to set up methods to characterize adenosine receptors or their cellular actions. It also provides a convenient summary and aide-mémoire to those already working in this area. And, importantly, the publishers are to be congratulated on providing a commendably cheap volume which like the others in this series, is extremely good value by comparison with some of their competitors' books.

Jeremy Pearson

Frontiers in Excitatory Amino Acid Research

Neurology and Neurobiology Volume 46

Edited by E.A. Cavalheiro, J. Lehmann and L. Turski

A.R. Liss; New York, 1988

745 pages. $130.00

This volume represents the collected papers presented at the symposium, entitled 'Excitatory Amino Acids '88', that was held in Manaus, Brazil, during March and April of that year. That the book has been produced so promptly is a tribute to the organisation of the editors and publishers, which is to be applauded.

The book is introduced with a review by J.C. Watkins, whose immense contribution to developing this field of study makes such a prominent position especially fitting. There follow chapters on the excitatory functions of amino acids, with special reference to receptors and changes in neuronal metabolism; receptors and neural pathways and electrophysiological aspects of the activities of excitatory amino acids. Three chapters on the uses of excitatory amino acids antagonists then follow, which include papers on epilepsy, anxiety and spasticity. A further three chapters explore the roles of excitatory amino acids in learning and memory and in the functioning of sensory and motor systems.

A group of papers concerned with factors that modulate NMDA receptors (prefaced by an interesting review by D. Lodge and colleagues) is followed by two chapters on the more pathological aspects of excitatory amino acids, including papers on endogenous excitotoxins (prefaced by a review by J.W. Olney) and in ischaemia, hypoglycaemia and stroke.

A book of this nature, consisting as it does of a collection of camera-ready papers, does not endear itself to the reader as a work to be cherished for its own sake. However, this is not the function that is here intended. Instead the editors and publishers have attempted to assemble a collage of current research which, inevitably scattered throughout numerous primary sources, would be hard to find even by those fortunate enough to have access to excellent library facilities. The standard of the papers presented is very high and, in reading them, a strong sense of the excitement generated by the rapid progress of this research field is conveyed. Thus, the primary aim of the book is clearly achieved and, as a result, it can be firmly recommended.

P.B. Nunn